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The 1980 Iowa Corn Yield Test Report, District 6

K. E. Ziegler
Iowa State University

A. R. Campbell
Iowa State University

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The 1980 Iowa Corn Yield Test Report, District 6

Abstract

Results of the Iowa Corn Yield Test are published to aid Iowa farmers in selecting corn varieties. This is the sixty-first consecutive year for the test.

Disciplines

Agriculture | Agronomy and Crop Sciences



- Crops
- Soils
- Climate

THE 1980 IOWA CORN YIELD TEST REPORT

District 6

Results of the Iowa Corn Yield Test are published to aid Iowa farmers in selecting corn varieties. This is the sixty-first consecutive year for the test.

The presentation of data for the varieties tested does not imply approval or endorsement by the authors or by the agencies sponsoring or conducting the test. Iowa State University approves the reproduction of any table in this report **only** if no portion is deleted and if the order of the data is not rearranged. Entries in tables 1 and 2 are designated by brand name and variety.

1980 Procedure

Producers of corn seed and Iowa State University were eligible to enter varieties in the Iowa Corn Yield Test. Each producer was allowed a maximum of nine entries per district. All entries had to be available in a quantity of at least 10 bushels of seed.

One hundred thirty two entries were compared in this test. Seventeen of them were determined to be widely grown and were entered by Iowa State University. A widely grown entry was planted on 0.75 per cent or more of the corn acreage in the district according to a 1978 survey of Iowa corn growers. Iowa State University entered a maximum of three widely grown varieties of any given brand. These entries were given priority over the remaining 115 entries made by seed producers.

Each entry was replicated four times in 4-row plots at a planting rate of 25,500 kernels per acre at each location. All locations were machine-planted. The center two rows of each plot were harvested with a corn combine. No gleanings or dropped ears were included in yield data. A moisture determination was made from each plot, and yields were corrected to 15.5-percent moisture for shelled corn.

Prepared by K. E. Ziegler, instructor in agronomy, and A. R. Campbell, associate professor of agronomy and secretary of the Iowa Crop Improvement Association.

How Information Is Presented

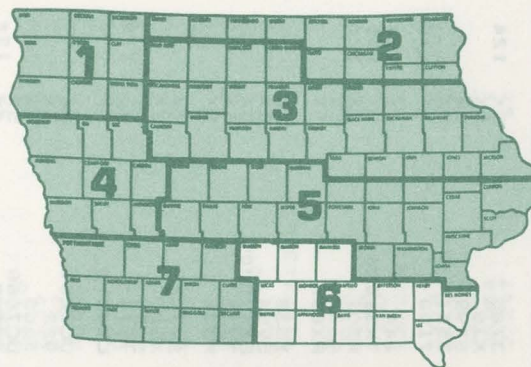
The data presented are averages of two locations in 1978 and 1979 and one location in 1980. Yield in bushels per acre and percentage of moisture, root lodging, stalk lodging, dropped ears, and stand are shown for all entries in 1980 and for those tested in 1978 and 1979 that were in the 1980 test.

Interpretation of Results

Yield differences due to variation in soil, fertility, moisture availability, insect infestation, and diseases, plus any variation due to planting and harvesting techniques, are identified through statistical analysis. The LSD values shown in tables 1 and 2 represent, in bushels per acre, the amounts of yield variation that could be due to variations in the factors just mentioned. In comparing varieties, yield differences greater than the LSD value can be attributed to genetic differences in the yield potential of these varieties; yield differences less than the LSD value are not statistically different and could have been due to other factors.

Grain moistures shown in tables 1 and 2 are indicators of maturity and natural drying rate. Maturity of varieties entered generally ranged from early to full season. Yield comparisons should be made among varieties of similar maturity.

It is important to select varieties having stable performance over a range of environmental conditions. High yields for two or more consecutive years indicate stable performance. Supplemental yield and agronomic information about specific varieties may be obtained from your seed corn dealers and from neighbors who have grown these varieties.



Cooperative Extension Service,
Agriculture and Home Economics Experiment Station,
Iowa Crop Improvement Association, and the
United States Department of Agriculture cooperating

Cooperative Extension Service
Iowa State University
Ames, Iowa 50011

TABLE 1. AVERAGE PERFORMANCE OF VARIETIES TESTED IN DISTRICT 6.
MODERATE POPULATION - 25,500 PLANTING RATE. LSD FOR 1980 YIELD IN BUSHELS IS 25.

BRAND	VARIETY	CROSS	YIELD BU./A			MOISTURE PCT.			ROOT LODGING PCT.		STALK LODGING PCT.			DROPPED EARS PCT.			STAND PCT.			
			1978	1979	1980	1980	1979	1978	1980	1979	1978	1980	1979	1978	1980	1979	1978	1980	1979	1978
*PIONEER	3780	SX	124	160	106	15.7	17.6	15.9	0	1	2	0	4	14	0	0	1	79	81	88
EMBRO	X36	SX		170	112	16.4	17.9		0	5		3	2		1	0		83	84	
PAYCO SEEDS	SX990	SX			116	17.1			1			0			0			85		
PIONEER	3541	SX			113	17.3			0			0			1			83		
DOCKENDORFF	7100	SX	118	163	129	17.5	18.8	17.9	0	6	3	1	2	15	0	0	2	87	78	81
FS	444	SX	117	168	129	17.7	18.4	17.4	1	12	3	2	2	18	0	0	4	84	79	83
*TROJAN	TXS108A	SX	106	148	97	17.8	19.3	17.9	0	4	4	3	0	20	0	0	5	83	79	81
MIDDLEKOOP	M301	SX	126	157	127	17.8	18.6	17.7	1	7	3	0	4	14	0	0	3	87	77	86
SUPER CROST	4337	SX			113	18.5			1			2			0			67		
NORTHRUP KING	PX69A	SX			139	18.5			0			0			0			89		
LEWIS	X53B	SX			111	18.6			0			0			0			90		
PRAIRIE VALLEY	595A	SX			122	18.6			0			0			0			84		
TROJAN	EXP95809	SX			127	18.6			0			2			0			85		
DOCKENDORFF	7338	SX			122	18.7			0			0			1			86		
MIDDLEKOOP	M330	SX			121	18.9			1			0			0			85		
MCALLISTER	SX7918	SX			128	18.9			0			0			0			89		
EMBRO	X50	SX			105	19.0			2			2			0			88		
MFA	5104	SX		164	132	19.3	22.2		11			5	5		0	1		89	81	
PRIDE	7710	SX		188	148	19.3	23.2		17	17		1	3		0	0		77	80	
LYNKS	LX4315	SX			126	19.3			0			0			0			92		
ACCO	UC7251	SX			141	19.4			8			5			0			77		
CARGILL	922	SX			121	19.7			0			2			1			84		
PFISTER	3565	MS			87	19.8			0			4			0			91		
ACCO	UC7660	SX			118	19.8			5			5			0			81		
*PAG	SX397	SX		163	126	19.8	19.6		4	1		5	21		1	0		89	85	
EK PREMIUM	EK7770	SX			126	19.9			0			0			1			78		
AMES BEST	SX20	SX		200	123	19.9	23.4		9	14		4	1		0	0		83	81	
*DEKALB	XL64	SX	123	169	119	20.0	21.9	20.6	1	0	3	0	2	17	0	0	1	89	88	87
CARGILL	921	SX		168	117	20.0	21.2		4	4		1	9		0	0		91	81	
JACQUES	JX187A	SX			138	20.0			5			3			1			86		
MCALLISTER	SX7909	SX			110	20.0			0			3			0			77		
RO HYBRIDS	2510	SX			131	20.0			1			4			0			83		
AMERICANA	0275	SX			134	20.1			1			1			1			88		
PRAIRIE VALLEY	767	SX		168	99	20.2	23.9		11	3		0	0		1	0		86	74	
O'S GOLD	SX3344	SX		194	154	20.2	23.1		13	13		2	9		0	0		80	85	
MIDDLEKOOP	M335	SX		195	159	20.2	23.7		1	8		3	2		1	1		86	85	
FUNK	G4520	SX	132	181	117	20.2	22.1	21.4	1	8	6	3	2	19	0	0	2	78	77	86
NORTHRUP KING	PX72	SX			145	20.2			12			3			1			85		
MCCURDY	7440	SX		191	135	20.3	24.3		10	13		2	4		0	0		82	85	
PRIDE	7715	SX	112	186	122	20.5	23.8	20.7	9	7	5	0	2	17	0	0	3	86	84	81
FUNK	G4606	MS	134	192	107	20.5	23.1	21.0	8	6	8	7	1	14	0	0	1	83	82	79
FEDERAL	FX39	SX		190	123	20.5	24.7		3	9		1	1		0	0		83	85	
PACIFIC OILSEED	PO179	SX			117	20.6			0			1			0			88		
PACIFIC OILSEED	PO14-14	SX			116	20.7			2			2			0			77		
*FUNK	G4507	SX	113	196	80	20.7	23.7	21.2	7	9	3	1	2	20	0	0	5	82	79	81
MFA	6707	SX			139	20.7			0			0			0			88		
PRAIRIE VALLEY	600	SX			139	20.8			0			2			0			89		
PAG	SX333	SX	128	207	127	20.8	24.0	21.5	5	8	6	1	1	18	0	0	5	89	86	86
AMERICANA	3200	SX	125	196	98	20.9	24.5	21.5	3	9	4	0	1	19	1	0	2	90	85	85
MCCURDY	84	SX	116	204	107	20.9	24.2	20.9	1	3	8	1	2	18	0	0	5	86	89	88
SUPER CROST	5440	SX	131	191	72	21.0	23.9	21.1	1	5		2	0	15	0	0	3	76	79	97
DOCKENDORFF	7900	SX	142	182	1383															

1980 Field Data

The District 6 test was conducted on farms operated by Maurice Beaver near Cedar in Mahaska County, and by Charles Fricke near Mount Union in Henry County. The Henry County data is not included in the report because of extreme variability. The field data for the Mahaska County location are presented in table A. Both tests suffered from the hotter than normal temperatures received at pollinating time.

Subsoil moisture for the district was favorable at planting time. Rainfall was well below normal in May and July, above normal in June and August, and near normal in September. Temperatures were above normal in May, near normal in June, and well above normal in July, August, and September. The average district yield was twenty-six bushels per acre lower than the combined mean of the five preceding years.

Table A. Field Data

Beaver Farm Taintor silty clay loam			
Fertilizer applied, lbs.	N	P ₂ O ₅	K ₂ O
Plowdown	36	92	80
Preplant	150	—	—
TOTAL	186	92	80
1979 Crop	Soybeans		
Row Width	30 inches		
Planting date	April 30		
Harvest date	Oct. 4		

District 6

Designations Identifying Brands in the Yield Test

ACCO	ACCO Seed Div. of Anderson, Clayton & Co., Belmond, Ia. 50421
Americana	Americana Seeds, Bowen, Ill. 62316
Ames Best	Ames Best Hybrids, Ames, Ia. 50010
Asgrow	Asgrow Seed Company, Kalamazoo, Mich. 49001
*Cargill	Cargill, Inc., Minneapolis, Minn. 55440
Coop	Farmland Industries, Inc., Kansas City, Mo. 64116
*DeKalb	DeKalb AgResearch, Inc., DeKalb, Ill. 60115
Dockendorff	Dockendorff Hybrids, Danville, Ia. 52623
EK Premium	EK Premium Hybrid Corn, Berwick, Ill. 61417
Embro	Embro Seed Company, Mankato, Minn. 56001
Federal	Federal Hybrids, Marion, Ia. 52302
Fruntd	Fruntd Seed Co. Inc., Pella, Ia. 50219
F.S.	Growmark, Inc., Bloomington, Ill. 61701
*Funk	Funk Seeds International, Inc., Bloomington, Ill. 61701
*Golden Harvest	The J. C. Robinson Seed Company, Waterloo, Neb. 68069
Iowa-Missouri	Iowa-Missouri Hybrid Corn Co., Keosauqua, Ia. 52565
Jacques	Jacques Seed Company, Prescott, Wis., 54021
Lewis	Frank W. Lewis & Son Seed Farms, Inc., Ursa, Ill. 62376
Lynks	Lynks Hybrids, Marshalltown, Ia. 50158
*McAllister	McAllister Seed Farms, Mt. Pleasant, Ia. 52641
McCurdy	McCurdy Seed Co., Fremont, Ia. 52561
MFA	Missouri Farmers Association, Inc., Columbia, Mo. 65201
*Middlekoop	Middlekoop Seed Corn Co., Packwood, Ia. 52580
Migro	North American Plant Breeders, Ames, Ia. 50010
Northrup King	Northrup King Co., Minneapolis, Minn. 55440
*O's Gold	O's Gold Seed Co., Parkersburg, Ia. 50665
Pacific Oilseed	Pacific Oilseeds, Inc., Woodland, Cal. 95695
*PAG	PAG Seeds, Minneapolis, Minn. 55440
Payco	Payco Seeds, Inc., Dassel, Minn. 55325
Pfister	Pfister Hybrid Corn Co., El Paso, Ill. 61738
*Pioneer	Pioneer Hi-Bred International, Inc., Des Moines, Ia. 50308
Prairie Stream	Prairie Stream Hybrids, Frankfort, Ind. 46041
Prairie Valley	Prairie Valley, Inc., Phillips, Neb. 68865
Pride	Pride Company, Inc., Glen Haven, Wis. 53810
RO Hybrids	Ottile Seed Farms, Marshalltown, Ia. 50158
Super Crost	Edward J. Funk & Sons, Inc., Kentland, Ind. 47951
Tall Corn	Tall Corn Hybrids, Inc., Grinnell, Ia. 50112
*Trojan	Pfizer Genetics, Inc., Eldora, Ia. 50627
Winterset	Winterset Hybrid Company, Winterset, Ia. 50273

*Companies with one or more widely grown entries made by Iowa State University.

TABLE 2. AVERAGES OF 1979-80 AND 1978-80 OF VARIETIES TESTED IN DISTRICT 6. LSD FOR YIELDS ARE 10 BUSHELS FOR 78-80 AND 13 BUSHELS FOR 79-80.

BRAND	VARIETY	CROSS	YIELD 78-80	BU./A 79-80	MOISTURE 79-80	PCT. 78-80
*PIONEER	3780	SX	130	133	16.6	16.4
EMBRO	X36	SX	138	141	17.1	17.8
FS	44A	SX	136	140	18.0	17.8
DOCKENDORFF	7100	SX	136	146	18.1	18.1
MIDDLEKOOP	M301	SX	136	142	18.2	18.0
*TROJAN	TXS108A	SX	117	122	18.5	18.3
*PAG	SX397	SX	122	144	19.7	19.7
CARGILL	921	SX	142	142	20.6	20.6
MFA	5104	SX	148	148	20.7	20.7
*DEKALB	XL64	SX	137	144	20.9	20.8
FUNK	G4520	SX	143	149	21.1	21.2
PRIDE	7710	SX	168	168	21.2	21.2
AMES BEST	SX20	SX	161	161	21.6	21.6
O'S GOLD	SX3344	SX	174	174	21.6	21.6
FUNK	G4606	MSX	144	149	21.8	21.5
MIDDLEKOOP	M335	SX	149	177	21.9	21.9
*PIONEER	3382	SX	149	177	21.9	21.5
*MIDDLEKOOP	M339	SX	152	186	21.9	21.4
CARGILL	967	SX	159	159	22.0	22.0
DOCKENDORFF	7900	SX	154	160	22.0	21.6
PRAIRIE VALLEY	767	SX	140	133	22.0	22.0
PRIDE	7715	SX	140	154	22.1	21.7
PFISTER	65	SX	133	139	22.1	21.7
*FUNK	G4507	SX	129	138	22.2	21.9
MCCURDY	7440	SX	163	163	22.3	22.3
PAG	SX333	SX	154	167	22.4	22.1
SUPER CROST	5440	SX	131	131	22.4	22.0
MCCURDY	84	SX	142	155	22.5	22.0
EMBRO	X60	SX	142	155	22.5	22.0
*DEKALB	XL72AA	SX	124	126	22.5	22.0
PRAIRIE STREAM	SX66	SX	150	124	22.5	22.5
*O'S GOLD	SX5500A	SX	145	154	22.6	22.2
*CARGILL	949	SX	145	154	22.6	22.0
FEDERAL	FX39	SX	139	156	22.6	22.6
AMERICANA	3200	SX	139	147	22.7	22.3
*GOLDEN HARVEST	H2500	SX	158	158	22.7	22.7
MFA	5802	SX	146	146	22.7	22.7
COOP	2300	SX	151	151	22.7	22.7
ASGROW	RX777	SX	158	158	22.7	22.7
PFISTER	75	SX	143	156	22.8	22.2
PRAIRIE VALLEY	76S	SX	145	154	22.8	22.8
FS	680	SX	145	147	22.8	22.4
TALL CORN	SX115	SX	142	135	22.8	22.8
LYNKS	LX4330	SX	142	149	22.9	22.5
*MIDDLEKOOP	M315	SX	149	159	22.9	22.3
FRUNDT	SX55	SX	150	147	22.9	22.9
MCCURDY	77	SX	150	152	22.9	22.8
*MCALLISTER	SX7300	SX	143	145	23.0	22.3
NORTHROP KING	MX74	SX	145	152	23.0	22.4
MIGRO	HP44	SX	140	144	23.0	22.3
*TROJAN	TXS115A	SX	130	131	23.0	22.4
ASGROW	RX90	SX	143	156	23.1	22.5
WINTERSET	SX68	SX	148	148	23.3	23.3
LYNKS	LX4375	SX	148	152	23.3	23.4
MCALLISTER	SX7617	SX	152	152	23.4	23.4
DOCKENDORFF	7700	SX	143	152	23.5	22.7
*MCALLISTER	SX7300B	SX	153	154	23.5	23.5
*DEKALB	XL72B	SX	128	136	23.7	23.1
ASGROW	RX909	SX	138	138	23.7	23.7
ASGROW	RX98	SX	141	147	23.7	23.0
FS	848	SX	154	154	23.9	23.9
AMES BEST	VIKESX500	SX	147	147	23.9	23.9
PAG	SX373	SX	148	148	24.0	24.0
TROJAN	T1189	SX	147	147	24.1	24.1
*O'S GOLD	SX5500	SX	158	158	24.1	24.1
AMERICANA	4640	SX	155	155	24.6	24.6
AMES BEST	SX24	SX	162	162	24.7	24.7
MIGRO	MX707	SX	145	145	24.7	24.7
NORTHROP KING	MX87	SX	151	159	24.7	24.3
*TROJAN	TXS119	SX	146	159	24.8	24.4
EMBRO	X74	SX	151	151	24.9	24.9
TALL CORN	SX120	SX	172	172	25.0	25.0
LYNKS	LX4500	SX	165	165	25.1	25.1
MCCURDY	B4AA	SX	168	168	25.2	25.2
MIGRO	HP87	SX	168	168	25.3	25.3
WINTERSET	SX89	SX	164	164	25.4	25.4
IOWA-MISSOURI	SX18	SX	148	154	25.4	24.8

OTHER REPORTS

Separate reports for variety performance are available for each district shown in fig. 1. These publications are available at your county extension office or from Publications Distribution, Printing and Publications Building, Iowa State University, Ames, Iowa 50011.

The 1980 Iowa Corn Yield Test Report:

Pm-660-1-80 District 1	Pm-660-5-80 District 5
Pm-660-2-80 District 2	Pm-660-6-80 District 6
Pm-660-3-80 District 3	Pm-660-7-80 District 7
Pm-660-4-80 District 4	

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and justice for all

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